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# Harm reduction: An approach to reducing risky health behaviours in adolescents

## INTRODUCTION

Harm reduction is a public health strategy that was developed initially for adults with substance abuse problems for whom abstinence was not feasible. Harm reduction approaches have been effective in reducing morbidity and mortality in these adult populations. In recent years, harm reduction has been successfully applied to sexual health education in an attempt to reduce both teen pregnancies and sexually transmitted diseases, including HIV. Programs using a harm reduction philosophy have also successfully lowered risky alcohol use. The target patient population and the context in which harm reduction strategies are delivered influence the specific interventions used. Health care practitioners (HCPs) who provide care to adolescents should be aware of and familiar with the types of harm reduction strategies aimed at reducing the potential risks associated with normative adolescent health behaviours.

The goal of the present statement is to provide HCPs with a background and definition of harm reduction as a public health policy, and to describe how HCPs can effectively use harm reduction with their adolescent patients.

## BACKGROUND

Harm reduction can be described as a strategy directed toward individuals or groups that aims to reduce the harms associated with certain behaviours. When applied to substance abuse, harm reduction accepts that a continuing level of drug use (both licit and illicit) in society is inevitable and defines objectives as reducing adverse consequences. It emphasizes the measurement of health, social and economic outcomes, as opposed to the measurement of drug consumption (1-5).

Harm reduction has evolved over time, from its initial identification in the 1980s, as an alternative to abstinence-only focused interventions for adults with substance abuse disorders (6). At the time, it was recognized that abstinence was not a realistic goal for those with addictions. In addition, those individuals who were interested in reducing, but not eliminating, their use were excluded from programs that required abstinence.

There is persuasive evidence from the adult literature that harm reduction approaches greatly reduce morbidity and mortality associated with risky health behaviours. For

example, areas that have introduced needle-exchange programs have shown mean annual decreases in HIV seroprevalence compared with those areas that have not introduced needle-exchange programs (7). Access to and use of methadone maintenance programs are strongly related to decreased mortality, both from natural causes and overdoses, which suggests that these programs have an impact on overall sociomedical health (8). The most recent addition to the harm reduction continuum is that of supervised injecting facilities, which have been successfully implemented in Switzerland and the Netherlands, and more recently in Vancouver, British Columbia. HCPs play important roles in many of these harm reduction initiatives.

How can this concept of harm reduction be applied to adolescents? The majority of adolescents are not going to require the kind of harm reduction strategies mentioned above. However, a harm reduction approach is congruent with what we know about adolescent development and decision-making. Adolescence is a time of experimentation and risk-taking. Adolescents also tend to reject authority and strive for autonomy in their decision-making. Young people engage in behaviours that have potentially negative outcomes.

In one study (9), more than two-thirds of high school students in Ontario reported having used alcohol at least once over the previous year, and one-third reported cannabis use over the previous year. Alcohol ingestion presents the potential for intoxication and overdosing (particularly when binge drinking occurs). Alcohol disinhibits an individual, which may promote aggressive behaviour and fighting, or which may be associated with unwanted sexual advances or experiences. Between 8% and 10% of teens reported that using drugs or alcohol was the reason that they had intercourse for the first time (10). Unprotected sexual activity is associated with a higher incidence of sexually transmitted infections (STIs) and can lead to unintended pregnancy. In fact, the highest rates of STIs in Canada are in the 15- to 24-year age group, with girls 15 to 19 years of age having the highest rates for chlamydia and gonorrhea (11). The 2002 Canadian Youth, Sexual Health and HIV/AIDS Study (10) reported that while the age at initiation of intercourse is decreasing gradually over time, the median age for first intercourse has not changed in over a decade and

**Table 1**  
**Examples of motivational interviewing techniques**

Technique	Example
Open-ended questions	How does drinking on the weekends affect getting your homework done?
Reflective listening	It sounds like you are very upset about the recent break-up with your girlfriend. I wonder whether you are more likely to drink when you are upset?
Affirmations	Deciding not to go that party sounds like a good choice. It may be difficult to avoid drinking if you went.
Summary statements	It is important to be able to hang out with your friends. Are there other activities you do with that group?
Eliciting change talk	What are some of the things you would like to change?

*Adapted from reference 21*

remains around 17 years of age. Almost 30% of boys and girls in grade 9 reported having had oral sex.

Overall, long-term trends have shown some changes in these behaviours over time; however, it is highly unlikely that any interventions will eliminate these behaviours from adolescence. It is conceivable, however, that enhanced strategies will be developed, with the aim of slowing down some of the trends seen over the past decade. This would include trends of decreasing age at first use of substances such as cannabis and earlier ages of onset of sexual activity.

There are several possible approaches to substance use and other risky behaviours:

- Discourage the behaviour (ie, recommend that the teen stop the behaviour completely);
- Encourage the teen to reduce the behaviour; and
- Provide the teen with information aimed at reducing the harmful consequences of the behaviour when it occurs.

Some studies (12) from the substance use literature have identified that the perceived risk of harm is inversely related to the level of use. The provision of education about the potential risks and ways of reducing them may impact on these behaviours. It is important to acknowledge that programs aimed at the primary prevention of a particular behaviour need to differ in focus from those aimed at secondary prevention in groups of adolescents in which the behaviour is already established. This requires careful consideration of the intended target population and the context in which the approach is used (13).

Primary prevention of risky behaviour is a reasonable focus for the young adolescent or preteen. This may be achieved by discouraging the behaviour (using sexual behaviour as an example – by encouraging the delay of initiation of sexual activity). For an adolescent who is already engaging in potentially risky sexual behaviour, he

or she can be encouraged to reduce the behaviour, and can also be provided with information and education about condom use, additional contraception, and discussion about the pros and cons of sexual activity. For a street-involved young woman who is engaging in prostitution, providing free condoms, as well as regular access to STI testing and emergency contraception (in addition to other biopsychosocial care), may be the most appropriate intervention at the time. This would, however, not preclude the discussion of the option of reduction or elimination of the risky behaviour.

There is a growing literature supporting the efficacy of harm reduction strategies in both the prevention and intervention of behaviour with potential health risks. Marlatt and Witkiewitz (14) published a comprehensive review of harm reduction approaches to alcohol use, and summarized the relevant literature on health promotion prevention and treatment. They discussed the data on a program that was widely implemented in the United States, a program known as Drug Abuse Resistance Education (DARE), which focused on zero tolerance (the 'just say no' concept). Several studies (15,16) have demonstrated that this program was nonefficacious in reducing substance use. Two examples of programs that have been successfully implemented and evaluated based on a harm reduction philosophy are the Alcohol Misuse Prevention Study (AMPS) (17) in the United States, and the School Health and Alcohol Harm Reduction Project (SHAHRP) in Australia (18).

The AMPS program is a curriculum aimed at grade 5 and grade 6 students, and includes information about the harms of alcohol abuse and how to deal with social pressures to misuse alcohol. In a randomized, controlled study (19), participants in the AMPS program had significantly fewer alcohol problems than controls. The program has also demonstrated reductions in the normative increases in alcohol use and misuse in early to late adolescence.

The SHAHRP program has similar components to the AMPS program, and consists of active learning incorporating skills training and alcohol education. Evaluation of this program has demonstrated significant reductions in alcohol consumption and alcohol-related harms in those students participating in the program compared with controls (17).

These prevention programs have not been effective in changing behaviour in those teens that are already engaged in harmful drinking. The concept of learning how to drink more safely is consistent with the fact that many adolescents see drinking as normative. It is also developmentally congruent that adolescents are less likely to engage in a program or treatment that 'requires' them to behave in a certain way, and may rebel against anything they see as being judgemental. Strategies that incorporate motivational interviewing (19) and acknowledge the adolescent's individual goals are being developed for use with adolescents. Motivational interviewing includes guidelines for addressing resistance, and addressing ambivalence or resistance to change (Table 1). It emphasizes self-responsibility

in changing or modifying one's behaviour (20-22). The use of these types of strategies with slightly older participants (17 to 20 years of age) have led to reductions in alcohol-related problems (23). Monti et al (24) reported on a brief intervention with 18- and 19-year-olds who presented to the emergency room with an alcohol-related event. They demonstrated that those randomly assigned to the 35 min to 40 min motivational interviewing style session, had significantly lower incidences of drinking and driving, alcohol-related injuries and alcohol-related problems after six months of follow-up.

Harm reduction has also been used in primary and secondary prevention programs aimed at reducing unintended pregnancies. A recent review (25) demonstrated that programs that incorporate messages about both delayed abstinence and the use of condoms and contraception were more effective than those delivering abstinence-only messages.

There are many other examples of harm reduction strategies that have been implemented successfully. These include condom machines in high schools, seat belt legislation and programs promoting safe participation in sports (eg, wearing bike helmets, life vests for boating and hockey visors). The basic premise of harm reduction holds for all of these programs (ie, there are inherent risks involved with any behaviour, and there are interventions that, when followed, reduce these risks for those who choose to engage in the behaviours).

HCPs routinely incorporate information about many harm reduction strategies into their everyday clinical work with patients, without explicitly realizing that they are harm reduction strategies. Examples of these are promoting the use of bike helmets, encouraging patients to wear protective gear while skateboarding and promoting the use of sunscreen. This is a significant component of preventive health care.

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## CONCLUSIONS

Harm reduction is a developmentally congruent approach to the primary and secondary prevention of risky behaviour in the adolescent population. HCPs are well positioned to deliver harm reduction messages to their adolescent patients. Surveys of adolescents have supported the fact that adolescents identify HCPs as credible sources of health information (26-28). Acknowledging the adolescent's role in decision-making about his or her health behaviour is an important component to the provision of this education. Avoiding judgment about potentially risky behaviours enhances the ability of the HCP to deliver important messages about risk reduction.

## RECOMMENDATIONS

The Canadian Paediatric Society recommends that HCPs working with adolescents:

- Screen all preadolescent and adolescent patients for potentially risky behaviours at regular health care visits.
- Provide messages that encourage delay in initiation of potentially risky behaviours, and at the same time, promote risk-reduction strategies if adolescents choose to engage or are already engaging in the behaviour.
- Use principles of motivational interviewing in the assessment and discussion of risky health behaviours with adolescent patients (19-22).
- Become familiar with the resources in their communities that provide harm reduction programs for substance abuse, pregnancy prevention and injury prevention.
- Advocate for the introduction, further development and evaluation of evidence-based prevention and treatment programs that use a harm reduction philosophy in schools and communities.

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The recommendations in this statement do not indicate an exclusive course of treatment or procedure to be followed. Variations, taking into account individual circumstances, may be appropriate. *Internet addresses are current at time of publication*